INTERNATIONAL CONFERENCE ON PHENOMENA IN IONIZED GASES

POCKET PROGRAM & CONFERENCE GUIDE

EDITED BY Tatiana Kavka, Jiri Schmidt

ORGANIZED BY Institute of Plasma Physics AS CR, v.v.i.
with the participation of the Faculty of Electrical Engineering, Cech Technical University, and the Faculty of Mathematics and Physics of Charles University, all in Prague
CONFERENCE TOPICS

1. Elementary processes and fundamental data
2. Thermodynamic and transport phenomena
3. Plasma wall interactions, electrode and surface effects
4. Collective and nonlinear phenomena
5. Modeling and simulation techniques
6. Plasma diagnostic methods
7. Astrophysical, geophysical and other natural plasma
8. Low pressure discharges
9. High frequency discharges
10. Non-equilibrium plasmas and microplasmas at high pressures
11. Thermal plasmas
12. Complex and dusty plasma
13. Plasma processing of surfaces and particles
14. High pressure and thermal plasma processing
15. Plasma lamps and radiation sources
16. Medical, biological, and environmental applications
17. Plasma power and pulsed power technology, particle sources

CONFERENCE LOGISTICS

ICPIG registrants should wear the badges provided at registration at all times while attending the sessions, breaks and social events.

Oral presentations will be delivered using a computer and LCD projector. Talks (Microsoft Powerpoint or Adobe Acrobat files) should be either submitted on a CD (flash memory) a day ahead of each session or uploaded directly onto presentation computer not later then at 8:30 a.m. of the presentation day. Speakers are encouraged to preview their presentations using the set-up available in the Speaker’s Preview Room.

Posters should be put up not later then 2 hours before the beginning of respective poster session and must be removed before 9 a.m. of the following day.

Labelling of Lectures and Posters

*Invited lectures:* Gzz – general
*Workshops:* WAz – workshop A
*Tzz – topical* WBz – workshop B

*Posters:* xPyy-zz, *Post-deadline Posters:* PD-zz

x – poster session number, yy – topic number
z, zz – sequential poster/lecture number
MONDAY, July 16

General Invited Lectures (Top Congress Hall)

9:00  G01  L.C. Pitchford  
LAPLACE, Universite de Toulouse, Toulouse, France  
Generation of high-pressure, non-thermal plasmas in discharges in small geometries

9:45  G02  C.O. Laux  
Ecole Centrale Paris, Chatenay-Malabry, France  
Plasma-assisted combustion using nanosecond repetitively pulsed discharges

10:30  Coffee break

11:00  G03  N.J. Lopes Cardozo  
FOM Institute for Plasma Physics Rijnhuizen, Association Euratom-FOM, The Netherlands  
ITER: Giant plasma physics experiment and global move towards fusion power

11:45  G04  R. Hatakeyama  
Tohoku University, Sendai, Japan  
Novel-structured carbon nanotubes creation by nanoscopic plasma control

12:30  Lunch

14:00-15:30 Poster Session 1

Topic number 1

1P01-01  On the role of argon reactions in a low pressure Ar/O\textsubscript{2} discharge  
J.T. Gudmundsson, E.G. Thorsteinsson

1P01-02  Influence of pressure on the relative population of the two lowest vibrational levels of the C\textsuperscript{3}\Pi\textsubscript{u} state of nitrogen for 12 keV electron beam excitation  
A. Morozov, T.Heindl, J. Wieser,...
1P01-03 Scattering of electromagnetic radiation by dust induced plasma fluctuations (generalized theory for dust diagnostics)
*V. Tsytovich, G. Morfill*

1P01-04 Variational approach to excitation in p + Be$^{3+}$ collisions at intermediate and high impact velocities
*M. Bouamoud, B. Lasri, J. Hanssen*

1P01-05 Control of substrate potentials by injection of electron beam
*H. Amemiya, T. Misawa, Y. Ohtsu, H. Fujita*

1P01-06 Electron-atom bremsstrahlung in partially ionized plasma
*T.S. Ramazanov, Yu.A. Omarbakiyeva,...*

1P01-07 Formation of xenon excimer between 200 and 300 K following selective excitation of the Xe(6s) metastable state
*F. Marchal, R. Lauro, G. Ledru, G. Jabbour,...*

1P01-08 Photodissociation processes in diatomic molecules
*V. Aubrecht, M. Bartlova*

1P01-09 A two-temperature N$_2$ dissociation model derived from state-resolved rates
*M. Lino da Silva, V. Guerra, J. Loureiro*

1P01-10 Heat flux on the surface of an hypersonic vehicle: A preliminary study
*I. Armenise, S. Longo, M. Capitelli*

1P01-11 Ion swarm data of N$_4^+$ in N$_2$, O$_2$ and dry air
*A. Bekstein, M. Benhenni, M. Yousfi,...*

1P01-12 On N$_2$(C$^3\Pi_u$, v=0) state lifetime and collisional deactivation rate by N$_2$
*G. Dilecce, P.F. Ambrico, S. De Benedictis*

1P01-13 Electron transport in X/CF$_4$ mixtures (X=F, F$_2$, CF, CF$_2$, CF$_3$) and modelling of high E/N discharges
*Z. Nikitovic, V. Stojanovic, Z.Lj. Petrovic*

1P01-14 Ionization and dissociation dynamic of H$_2$ molecule driven by a laser field
*E. Fiordilino, G. Camiolo, G. Castiglia,...*

1P01-15 Stark widths dependence on the rest core charge of the emitters for multiply charged ions spectral lines
*J. Purić, M. Nikolić, M. Šćepanović*
1P01-16 Production and loss of rovibrationally excited H$_2$ molecules: Expanding hydrogen plasmas in experiment and model
_O. Gabriel, P. Vankan, D.C. Daan, R. Engeln_

1P01-17 Novel approach for assessing the electron transport properties in plasma thrusters
_G. Coduti, A. Lazurenko, C. Cavoit, ...

1P01-18 Electron interactions in CF$_3$I and CF$_3$I-N$_2$
_J.L. Hernández-Ávila, A.M. Juárez, ...

1P01-19 On the radiation trapping problem in a finite cylinder: Spatial distribution of resonance and metastable atoms
_Yu. B. Golubovskii, A. N. Timofeev, ...

1P01-20 On the radiation trapping problem in a finite cylinder: Decay of the resonance and metastable atoms
_Yu. B. Golubovskii, A. N. Timofeev, ...

1P01-21 Electron capture of singly-ionized lithium from hydrogen
_J.M.P. Serrão_

1P01-22 Synchronous generation of positive surface streamers in air, nitrogen and oxygen
_Y. Kashiwagi, H. Ito, H. Itoh_

1P01-23 Time-resolved measurement of electron swarm coefficients in tetrafluoroethane (R134a)
_E. Basurto, J.L. Hernandez-Avila, ...

1P01-24 Ozone production in dark discharge in oxygen
_P. Paris, F. Valk, M. Aints, K.V. Kozlov_

1P01-25 Ion and neutral species in H$_2$, H$_2$+Ar and H$_2$+N$_2$ plasmas generated in low pressure DC discharges
_I. Méndez, V.J. Herrero, I. Tanarro_

1P01-26 Mass spectrometric investigation of the ion chemistry in H$_2$/CH$_4$/N$_2$ DC discharges
_Tanarro I., Herrero V.J., Méndez I._

1P01-27 Ab initio calculations of low-lying states of SF$^-$
_O. Zivny, J. Czernek_

1P01-28 A comparison between AC and DC discharges in argon-hydrogen gas mixtures in the frame of the M-effect
_L.C. Ciobotaru, S.D. Popa_
1P01-29 Calculation of resonant charge exchange cross-sections of ions Rubidium, Cesium, Mercury and noble gases
S.A. Maiorov

1P01-30 Measurement of metastable helium atoms in a hollow cathode discharge using laser absorption spectroscopy
A. Okamoto, S. Kitajima, M. Sasao

1P01-31 Effects of condensation on excited states of non-polar molecules: Cyclohexane and tetramethylsilane
J.P. Guelfucci

1P01-32 Hydrodynamic approximation of stimulated Compton scattering of electromagnetic waves from a magnetized relativistic electron beam
Y. Ahmadizadeh, B. Shokri

1P01-33 Measurements and calculations of electron swarm coefficients in N₂-CO₂ mixtures
A. Juarez, M. Yousfi, J. de Urquijo, ...

1P01-34 Numerical calculation of Townsend electronic and ionic avalanches: electron detachment, photoelectron pulse and diffusion effects
A.M. Juarez, J. de Urquijo, ...

1P01-35 Electron impact ionization and transport in nitrogen-argon mixtures
J. Jovanovic, E. Basurto, J. de Urquijo, ...

1P01-36 Impact ionization & excitation cross-sections and numerical codes for non-stationary kinetics of plasmas
V.S. Zakharov, V.G. Novikov, S.V. Zakharov

1P01-37 The role of positronium formation in non-conservative positron transport in argon
M. Šuvakov, Z.Lj. Petrovic, J. Marler, ...

1P01-38 Methane conversion to higher hydrocarbons in AC dielectric barrier discharge
H. Savadkouei, N.S. Matin, A.H. Jalili, ...

1P01-39 Effect of different parameter on the selectivity of methane conversion using catalytic enhanced dielectric-barrier discharge
H.R. Bozorgzadeh, N.S. Matin, A.H. Jalili

1P01-40 Determination of collisional quenching rate coefficient of N₂(A³Σ_u⁺) by air pollutants
S. Suzuki, T. Suzuki, H. Itoh
1P01-41 Electron swarm parameters in pure N$_2$O and in dilute N$_2$O-Ar mixtures and electron collision cross sections of N$_2$O molecule

Y. Nakamura

1P01-42 Electron drift velocity and effective ionization coefficients in N$_2$O, N$_2$O-N$_2$ and N$_2$O-SF$_6$

E. Basurto, J.L. Hernandez-Avila,

**Topic number 2**

1P02-01 Electron-beam activation of Ar-SiH$_4$ mixtures. The role of secondary electrons and metastable atoms

A.V. Fedoseev, G.I. Sukhinin

1P02-02 Cut-off criteria of electronic partition functions and transport properties of thermal plasmas

D. Bruno, M. Capitelli, C. Catalfamo,

1P02-03 Transport of electronic energy in thermal plasmas

D. Bruno, M. Capitelli, C. Catalfamo,

1P02-04 The models of the electric arc between evaporating electrodes

V.A. Zhovtyansky, Yu.I. Lelyukh

1P02-05 Flowing characteristics of cold helium arc jet plasma along open-field-line

K. Yoshida, T. Kanuma, H. Ichii,

1P02-06 Characteristics of cold argon arc jet plasma flowing along open-field-line and the collision effects for deceleration

Y. Nagahara, H. Ichii, K. Yoshida,

1P02-07 Invasion of background atoms into hot rarefied expanding plasma jets

O. Gabriel, P. Colsters, D. Schram, R. Engeln

1P02-08 Supersonic ion flow in gas discharges

S.A. Maiorov

1P02-09 Transparent radiation of intensively blasted electrical arc

J. Gregor, I. Jakubova, J. Senk

1P02-10 Monte Carlo studies of the magnetic field effects on spatial relaxation of electron swarms

S. Dujko, Z.Lj. Petrovic, Z.M. Raspopovic,
1P02-11  Kinetic equation for charge carriers in solid state plasma  
S. Kh. Alavi, B. Shokri

1P02-12  Revisiting the normal cathode fall theory  
V.P. Nagorny

**Topic number 3**

1P03-01  N₂ laser - aluminum surface interaction  
*V. Henč-Bartolić, Z. Schauperl, D. Pipić*

1P03-02  Numerical analysis of the potential profile in the sheath formed in front of a floating electron emitting electrode immersed in a two-electron temperature plasma  
*T. Gyergyek, M. Čerček*

1P03-03  Anode boundary conditions for electron density of electric arcs  
*J.J. Lowke, M. Tanaka*

1P03-04  Investigation of the arc and glow phase fractions of ignition discharges in air and nitrogen for Ag, Pt, Cu and Ni electrodes  
*N. Jeanvoine, R. Jonsson, F. Muecklich*

1P03-05  Dynamical two-dimensional model of pre-explosion phase of microprotrusion heating by plasma contacting the wall  
*S. Barengolts, G. Mesyats, M. Tsventoukh*

1P03-06  Volt-ampere characteristics of planar diode in mode of emission limitation  
*A.I. Pushkarev, R.V. Sazonov*

1P03-07  Ion-conducting electrodes and probes for low temperature plasmas  
*S.A. Meiss, S.O. Steinmüller, M. Rohnke*

1P03-08  Plasma clouds collisions and ion trapping at laser–irradiated double–foil targets  
*O. Renner, F.B. Rosmej, E. Dalimier*

1P03-09  Stochastic models and computer simulation of first order phase transition non-linear fluctuation stage  
*G.I. Zmievskaya, A.L. Bondareva*

1P03-10  Electrically exploded wire in water  
*D. Priem, G. Racineux, G. Lochak, H. Lehn,*
1P03-11 Calculation of heterogeneous recombination probabilities from a dynamical Monte Carlo scheme: fluctuations and averaging
V. Guerra

1P03-12 Quantification of the sticking coefficient of hydrocarbons on fusion relevant carbon and tungsten surfaces
W. Schustereder, N. Endstrasser, B. Rasul,...

1P03-13 Microstructure surface damaging: ionizing radiation pulse fluxes surface treatment and computer simulation
A.L. Bondareva, G.I. Zmievskaya,...

1P03-14 Seasoning of plasma reactors: Effects of ion energy distributions to chamber walls
A. Agarwal, M.J. Kushner

1P03-15 Operation domains of an inside-gap RF discharge
C. Stancu, I. Luciu, R.E. Ionita, B. Mitu,...

**Topic number 4**

1P04-01 Magnetic field generation in collisionless anisotropic plasmas
F. Pegoraro, F. Califano, D. Del Sarto

1P04-02 Propagating double layers in electronegative plasmas
A. Meige, N. Plihon, G.J.M. Hagelaar,...

1P04-03 Limiting behaviour of a magnetised presheath
T.M.G. Zimmermann, M. Coppins, J.E. Allen

1P04-04 Nonlinear electromagnetic waves in pair plasmas
N.F. Cramer, I. Kourakis, F. Verheest

1P04-05 Effect of boundary conditions on the sheath potential establishment
H. Matsuura, Y. Tomita

1P04-06 Ultrarelativistic electron generation during the intense ultrashort laser pulse interaction with multicluster plasma
I.Y. Echkina, I.N. Inovenkov, Y. Fukuda,...

1P04-07 Research of charge balance in diode unit of pulsed electron accelerator
A.I. Pushkarev, R.V. Sazonov
1P04-08 Initial experiments of drift wave turbulence in helicon high-density linear plasma device, LMD-U
*S. Shinohara, Y. Nagashima, T. Yamada,...*

1P04-09 Control of the nonlinear dynamics of double layer charge structures using biharmonic perturbations
*D. Alexandroaei, C. Stan, C.P. Cristescu*

1P04-10 Structure of the Hall currents in a current sheet formed in the 2D magnetic field with the X type null line
*A.G. Frank, S.G. Bugrov, V.S. Markov*

1P04-11 First results from a purely toroidal electron plasma experiment
*J.P. Marler, Ha Bao, M.R. Stoneking*

1P04-12 Analysis of three simultaneously excited instabilities in low-temperature magnetized plasma
*D.G. Dimitriu, C. Ionita, R.W. Schrittwieser*

1P04-13 On the dynamics of a complex space charge structure in a transversal magnetic field
*O. Niculescu, D.G. Dimitriu, C. Ionita,...*

1P04-14 Auto-excitation of helicon oscillations in a magnetized plasma filled resonator
*K.M. Gutorov, V.A. Kurnaev, I.V. Vizgalov*

1P04-15 Rayleigh-Taylor and filamentation instabilities at the initial stage of the gas puff z-pinch implosion
*S. Chaikovsky, A. Labetsky, A. Roussikh,...*

1P04-16 Bifurcations of current transfer through a collisional sheath and self-organization on glow cathodes
*M.S. Benilov*

1P04-17 The responses to the high frequency oscillation in the strong self-organized toroidal plasma
*M. Watanabe, H. Tozuka, S. Shimizu,...*

1P04-18 Plasma parameters distribution in the experimental model of the compact-dipole magnetic confinement device
*G. Krashevskaya, V. Kurnaev, M. Tsventoukh.*
1P04-19 Characteristics of detached argon plasma flowing along magnetic field line in a linear plasma device
*N. Ezumi, T. Kobayashi, T. Tsuchiya,* ...

1P04-20 Lévy walk kinetics of charged particle in a model of electrostatic turbulence
*L. Krlin, R. Paprok, V. Svoboda*

1P04-21 Numerical investigation of stability of steady-state current transfer to thermionic cathodes
*M.S. Benilov, M.J. Faria*

1P04-22 Interaction of absolutely and neutrally stable shock waves with vortex: computer simulation and comparison
*V. Fortov, A. Konyukhov, A. Likhachev,* ...

1P04-23 Spatial distribution of streamer electron density in the development stage
*M. Chung*

15:30 Coffee break
16:00 – 17:30 Poster Session 2

**Topic number 5**

2P05-01 Ionization rate for breakdown waves
*M. Hemmati, M. Weller, S. Summers*

2P05-02 An analysis of the cathode spot current density effect on plasma parameters in low-current vacuum arc
*Narong Mungkung, Nuttee Thungsuk*

2P05-03 Computer simulation of focused electron beam generation by plasma electron gun
*I.V. Litovko, E.M. Oks*

2P05-04 Optimized process design of high density plasma-chemical vapour deposition of silicon oxide film
*K.H. Ryu, J. Hwang, D.S. Seo, S. Hong*

2P05-05 Numerical simulation of glow discharge parameters and its current-voltage characteristics in non-linear approach by solving integral equation
*I.V. Melnyk*

2P05-06 Modeling of dual-frequency capacitive discharges
*Z. Donko*

2P05-07 Effect of transverse magnetic field configuration on plasma immersion ion implantation processing
*K.G. Kostov, E.J.D.M. Pillaca*

2P05-08 Computer simulation of an atmospheric pressure RF plasma needle
*P. Kazimierski, D. Kotecka*

2P05-09 Simulation of streamer development in different electric fields
*Nikandrov D., Tsendin L., Kolobov V,...*

2P05-10 Caesium volume effects on multicusp ion source kinetics
*D. Pagano, C. Gorse, M. Capitelli*

2P05-11 Full-dimensional hybrid computer simulations of electropositive plasma behaviour in the vicinity of cylindrical probe
*P. Bartoš, R. Hrach, J. Blažek, P. Jelínek*
2P05-12 Neutral gas modelling of the linear plasma generator Magnum-PSI  
H.J.N. van Eck, W.R. Koppers, ...

2P05-13 Streamer propagation in non-uniform field with dielectric barrier  
A. Kumada, D. Morisaki, I. Takahashi, ...

2P05-14 Negative streamer fronts: comparison of particle and fluid models and hybrid coupling in space  
Chao Li, W.J.M. Brok, Ute Ebert, ...

2P05-15 Particle-based modeling of oxygen discharges  
F.X. Bronold, K. Matyash, D. Tskhakaya, ...

2P05-16 Simulations of vortex motion in electron plasmas using a special-purpose computer system designed to solve the N-body gravitational problem  
Y. Maeki, Y. Mizuno, K. Muto, H. Inuzuka, ...

2P05-17 Electron transport parameters and rate coefficients for the modeling a RF discharge in N₂-CH₄  
C.D. Pintassilgo, G. Alcouffe, ...

2P05-18 Polytropic coefficient gamma in the fluid simulation of the plasma-sheath transition  
K.-U. Riemann

2P05-19 The consequences of neglecting an external circuit in a 2d3v Particle-In-Cell/Monte Carlo Collisions model for a direct current planar magnetron  
E. Bultinck, I. Kolev, A. Bogaerts

2P05-20 Numerical simulation of filamentary discharges with the parallel adaptive mesh refinement technique  
S. Pancheshnyi, P. Segur, A. Bourdon

2P05-21 Spatially resolved electron transport behaviours near boundary  
A. Takeda, N. Ikuta

2P05-22 Progress in the simulation of hydrogen RF discharge plasmas  
P. Diomede, A. Michau, S. Longo, ...

2P05-23 Particle-in-cell simulation for the acceleration channel of a cylindrical Hall thruster  
Hae June Lee, Jongho Seon
2P05-24 Impact of azimuthal instabilities on electron behaviour in a Hall Effect thruster
  J. Perez-Luna., G.J.M. Hagelaar,...

2P05-25 Two-dimensional modelling of a microwave plasma reactor operated by an axial injection torch
  R. Álvarez, L. Marques, L.L. Alves

2P05-26 Modelling of a radio-frequency ICP-reactor with an ion beam system
  J. Cruz, J. Gregório, S. Cardoso, L.L.Alves,...

2P05-27 Plasma backflow phenomenon in high-current vacuum arc
  Lijun Wang, Shenli Jia, Ling Zhang,...

2P05-28 Fast magnetoacoustic waves in magnetized elliptic plasmas
  D.L. Grekov

2P05-29 Computational study of sheath structure in multicomponent plasma
  R. Hrach, V.Hrachova, P. Bruna, S. Novak,...

2P05-30 A unified theory of ionization and discharge physics based on EHD/EMHD as an extension of Alfvén’s MHD: A goal of Von Engel’s desire towards simplification and unification of ionization and discharge physics
  H. Kikuchi

2P05-31 A comparative study between 2D and 1D numerical models for the description of streamer propagation in air
  L. Papageorghiou, N. Spyrou

2P05-32 Theoretical and experimental studies of the plasma processes in hollow cathode discharge lasers
  D. Mihailova, M. Grozeva, N. Sabotinov,...

2P05-33 The role of the field emission effect in the deviations from the Paschen law
  M. Radmilovic-Radjenovic, B. Radjenovic

2P05-34 The influence of the initial energy and the reflection coefficient on the back diffusion of electrons in nitrogen
  M. Radmilović-Radjenović, Z. Lj. Petrović,...
2P05-35 Calculation of the real spectral line shape by solving the ill-posed inverse problem
_N. Zorina, G. Revalde, A. Skudra_

2P05-36 Pseudo-spectral 3D simulations of streamers with adaptively refined grids
_A. Luque, U. Ebert, C. Montijn,..._

2P05-37 The use of a direct numerical solution of the radiative transfer equation to improve the simulation of streamer discharges
_J. Capeillere, P. Ségur, S. Célestin,..._

2P05-38 Generalized model of dust grain charging in plasma sheath
_J. Blazek, R. Basner, P. Bartos, P. Spatenka,..._

2P05-39 Study of Z pinch evolution by snow-plow model
_H. Ghomi, S. Rostami, H. Latifi_

2P05-40 The scaling problem and the laminar-turbulent transition criterion for the plasma flow in the long plasmatron channel
_O.A. Sinkevich, S.E. Chikunov_

2P05-41 Plasma dynamics in hollow cathode triggered discharge with influence of fast electrons on ionization phenomena and EUV emission
_S.V. Zakharov, V.S. Zakharov, V.G. Novikov,..._

2P05-42 The structural unstable vector configuration in plasma and urbanistic
_I. Kurov_

2P05-43 Electron distribution function in the external corona of laser generated plasma
_M. Masek, K.Rohlena_

2P05-44 Simulation of the non-equilibrium transverse arc discharge in air
_A.A. Tropina, V.Sh. Avedyan_

2P05-45 Radiation transport in metal halide lamps
_M.L. Beks, J.J.A.M. van der Mullen_

2P05-46 PIC simulation and kinetic theory of the sheath in ion-ion plasmas
_A. Meige, G. Leray, J.-L. Raimbault,..._

2P05-47 One dimensional Hybrid Maxwell-Boltzmann model of sheath evolution comparison with PIC simulations
_P. Sarraillh, L. Garrigues, G.J.M. Hagelaar,..._
2P05-48 Formation of runaway electron distribution function during gas breakdown in high electric fields
D.S. Nikandrov, V.I. Kolobov

2P05-49 Numerical investigations on the stochastic heating
M. Bayrak, R.P. Brinkmann

2P05-50 Numerical investigation of the RF plasma boundary sheath
B.G. Heil, J. Schulze, T. Mussenbrock,...

2P05-51 Finite element analysis of atmospheric pressure RF-excited plasma needle for biomedical application
Y. Sakivama, D.B. Graves

2P05-52 Multigrid solver for axisymmetrical 2D fluid equations
Z. Ristivojevic, Z.Ij. Petrovic

2P05-53 Toward an improved moving mesh method for the simulation of streamer discharges
D. Bessieres, J. Paillol, A. Bourdon,...

2P05-54 Formation and propagation of ionization potential waves in various pressures
L. Papageorghiou, N. Spyrou

2P05-55 CH₄ plasma steam reforming modeling at atmospheric pressure
J.M. Cormier, F. Ouni, A. Khacef

2P05-56 Particle simulation of negative hydrogen ion transport
P. Diomede, S. Longo, M. Capitelli

**Topic number 13**

2P13-01 High-power pulsed magnetron sputtering: Model and experiments
K. Burcalová, J. Vlček, P. Kudláček

2P13-02 The role of per-hydroxyl in the multiwall carbon nanotube growth by PECVD
Q. Chen, Y. Fu, C. Zhang, Y. Zhang
2P13-03 Synthesis of carbon nanoparticles from Ar/H\textsubscript{2}/C\textsubscript{2}H\textsubscript{2} plasmas: analysis of the film properties and electron energy distribution function
\textit{M. Camero, F.J. Gordillo-Vázquez, ...}

2P13-04 Synthesis of Cu and Cu\textsubscript{2}O nanopowders by pulsed discharge in solution process for catalytic application
\textit{V.S. Burakov, A.V. Butsen, N.A. Savastenko, ...}

2P13-05 Energy and angular dependence of incident Ar ion in dry-etching of wurtzite-type GaN crystal
\textit{K. Harafuji, K. Kawamura}

2P13-06 Electrical discharges in liquids for nanoparticles production
\textit{V. Burakov, N. Savastenko, N. Tarasenko}

2P13-07 Surface modification of polyethylene and polypropylene in low-pressure plasma and in atmospheric pressure plasma-solution system
\textit{V. Titov, T. Shikova, V. Rybkin, A. Kulentsan, ...}

2P13-08 Plasma sputtering deposition of PEMFC active catalytic layer
\textit{H. Rabat, P. Brault, A. Caillard, ...}

2P13-09 Titanium thin films sputtered by a cavity hollow cathode discharge on highly oriented pyrolytic graphite
\textit{I. Vojvodic, S.B. Olenici, C. Ionita, S. Jaksch, ...}

2P13-10 MW plasma treatment of powder materials
\textit{P. Špatenka, J. Hladík, J. Píchal, L. Aubrecht}

2P13-11 Wettability of polyester fabric controlled by an atmospheric dielectric barrier discharge
\textit{Y. Klenko, J. Píchal, L. Aubrecht}

2P13-12 Deposition of metal nanoparticles at ionic-liquid|plasma interfaces
\textit{M. Poelleth, S.A. Meiss, M. Rohnke, ...}

2P13-13 Decomposition of organic dyes with sputtered TiO\textsubscript{2} photocatalytic films
\textit{J. Šicha, J. Musil}

2P13-14 Effect of hydrogen on sputtering discharge and properties of TiO\textsubscript{2} films
\textit{J. Musil, V. Ondok}
2P13-15 Application of hybrid nano-diamond coating to cutting tools
N. Sakudo, N. Ikenaga, H. Yasui, K. Awazu

2P13-16 Silicon surface processing by quasistationary plasma flow
I.P. Dojčinović, M.M. Kuraica, ... 

2P13-17 Encapsulation of plasma black nanoparticles by miniemulsion polymerization
H.S. Jang, D.W. Park, S.E. Shim

2P13-18 SiO₂ deposition using cold arc plasma jet at atmospheric pressure
Man Hyeop Han, Joo Hyon Noh, ...

2P13-19 Reactive magnetron sputtering of hard Si–B–C–N coatings with high-temperature oxidation resistance
S. Hřeben, J. Kalaš, J. Vlček, J. Čapek, ...

2P13-20 Effect of methane/hydrogen mixture gases on plasma-enhanced chemical vapor deposition for carbon nanotubes growth
A. Okita, Y. Suda, A. Oda, J. Nakamura, ...

2P13-21 Plasma surface modification in relation to polymer properties
C. Borcia, G. Borcia, N. Dumitrascu

2P13-22 Ar rf plasma effect on polymer surfaces
I.A. Rusu, G. Borcia, S.O. Sayed, J.L. Sullivan

2P13-23 Prospects of plasma-solution system application to textile material treatment
A.Yu. Nikiforov, A.I. Maximov, N.A. Ermolaeva

2P13-24 Oxidation of sputtered Cu films during thermal annealing in flowing air
M. Šašek, P. Zeman, J. Musil

2P13-25 Deposition and analysis of thin films produced in atmospheric pressure glow discharge
M. Šíra, V. Buršíková, D. Franta, D. Trunec

2P13-26 Experimental and theoretical study of PECVD in model of hollow substrates
P. Bartoš, L. Sedláková, P. Špatenka

2P13-27 FTIR analysis of plasma polymerized SiOₓ films for diffusion barrier coatings of PET bottles
M. Deilmann, C. Pawöhner, P. Awakowicz
2P13-28 TiO$_2$ thin films characterization by the polar and dispersion components of the surface free energy

*M. Horáková, A. Kolouch, K. Mužičková,...*

2P13-29 Amine functionality of poly(ethylene terephthalate) films surfaces induced by chemical and RF plasma treatments

*M. Aflori, M. Drobită, D. Țîmpu, V. Bărboiu*

2P13-30 Formation of carbon nanostructures by the plasma jets emitted from a pulsed capillary discharge at low pressures

*M. Favre, H. Bhuyan, E. Wyndham,...*

2P13-31 Uniformalization of the AT cut quartz crystal wafer using maskless localized atmospheric pressure plasma etching process

*K. Yamamura, Y. Yamamoto, T. Morikawa,...*

2P13-32 Characteristics of the electric discharge in conditions of a submerged liquid flow influence

*E.A.Azizov, A.I.Emel’yanov, N.B.Rodionov*

2P13-33 Vertically aligned carbon nanotubes growth on carbon layer encapsulated catalytic metal particles

*M. Mesko, Q. Ou, T. Matsuda, T. Tanaka,...*

2P13-34 Observation of surface and cross section of amorphous fluorocarbon films composed by perfluoro-octane plasma-enhanced chemical vapor deposition

*T. Yamauchi, H. Koike, H. Sugawara,...*

2P13-35 Application of atmospheric pressure glow discharge (APGD) for deposition of thin silica-like films on polymeric webs

*S.Starostin, E.Aldea, H. de Vries,...*

2P13-36 Metallic nanoparticle evolution by low-energy ion irradiation in glow-discharge plasma

*V. Abidzina, I. Tereshko, I. Elkin, S. Budak,...*

2P13-37 Plasma chemical surface functionalization of PTFE sheet through Atmospheric Pressure Plasma Liquid Deposition approach

*N. Zettsu, H. Itoh, and K. Yamamura*
2P13-38 Study of thickness reduction of a-C:H thin film under UV light irradiation
  M. Valtr, P. Klapetek, I. Ohlídal, V. Duchon

2P13-39 Deposition of Ba$_x$Sr$_{1-x}$TiO$_3$ thin films by double RF hollow cathode plasma jet system
  Z. Hubička, P. Virostko, J. Olejníček

2P13-40 Experimental study of the erosion of Ar/H$_2$ plasma-facing carbon surfaces: optical emission spectroscopy, mass spectrometry and spectroscopic ellipsometry measurements
  T. Hansen, G. Ledru, G. Yagci, S.V. Singh, ...

2P13-41 Comparison of magnetron based PECVD and high frequency PECVD for large area deposition
  R. Schmittgens, J. Fahlteich, M. Fahland, ...

2P13-42 Preparation of PBG fiber for ammonia concentration measuring device
  J. Pawłat, T. Matsuo, X. Li, T. Sugiyama, ...

2P13-43 Surface characterization of plasma modified chitosan film using surface-wave plasma
  A. Ogino, M. Král, M. Yamashita, M. Nagatsu

2P13-44 Electric probe diagnostics of the hollow cathode plasma jet system for TiO$_x$ thin films deposition
  P. Virostko, Z. Hubička, Š. Kment, ...

2P13-45 Deposition of thin TiO$_x$ films by surfatron generated plasma
  V. Strahnák, Š. Kment, Z. Hubička, P. Klusoň, ...

2P13-46 Ag-Al$_2$O$_3$ composite thin films deposited by Thermionic Vacuum Arc (TVA) Technology
  G. Musa, N. Ekem, S Pat, M. Contulov, ...

2P13-47 High-power pulsed magnetron sputtering of TiN films and their mechanical properties
  B. Zuštin, K. Burcalová, J. Vlček, J. Lukáš

2P13-48 Influence of set up parameters variation on Pulsed Laser Deposition of Glassy Carbon
  A. Mangione, L. Torrisi

2P13-49 Influence of the geometrical parameters on the thickness of carbon thin films deposited by Thermionic Vacuum Arc (TVA) Technology
  G. Musa, R. Vladoiu, A. Mandes, V. Dinca, ...
2P13-50 Diffuse Coplanar Surface Barrier Discharge assisted deposition of water repellent films from N₂/HMDSO mixtures on wood surface
*M. Odrášková, Z. Szalay, J. Ráhel*, …

2P13-51 Effect of substrate biasing on amino group addition on polyethylene surface using time-modulated surface-wave plasma
*M. Král, A. Ogino, K. Narushima*, …

2P13-52 Microfabrication process and power supply for tilt measurement device
*T. Matsuo, J. Pawlat, J. Liang, F. Kohsaka*, …

2P13-53 Etching of organic low dielectric constant film in 100MHz capacitively coupled H₂/N₂ gases plasmas
*H. Yamamoto, S. Takashima, K. Takeda*, …

2P13-54 Fabrication of submicron-dot-arrayed carbon nanotube emitters using DC plasma enhanced chemical vapour deposition
*T. Matsuda, T. Ishikawa, M. Mesko, A. Ogino*, …

2P13-55 Surface analysis by plasma assisted desorption ionisation mass spectrometry (PADI-MS)
*T.D. Whitmore, Y. Aranda Gonzalvo*, …
TUESDAY, July 17

Topical Invited Lectures *(Top Congress Hall)*

9:00  T01  J.S. Chang  
*McMaster, Hamilton, Canada*  
Physics and chemistry of plasma pollution control technology

9:30  T03  K. P. Giapis  
*Division of Chemistry and Chemical Eng., California Institute of Technology, Pasadena, USA*  
Nanoparticles from atmospheric pressure microdischarges

10:00  T05  P. Brault  
*Gremi, Orleans, France*  
Plasmas create a new path for future fuel cell designs

10:30  Coffee break

11:00  T07  F. Taccogna  
*I PP-M ax Planck Institute, Greifswald, German y*  
Kinetic simulations of plasma thrusters

11:30  T09  M. Ramisch  
*Institut für Plasmaforschung, Stuttgart, Germany*  
Spatio-temporal structure of plasma turbulence under strongly sheared flows

12:00  T11  V.B. Mintsev  
*Institute of Problems of Chemical Physic, Chernogolovka, Russia*  
Intense shock waves and extreme states of matter

12:30  Lunch
Topical Invited Lectures *(Congress Hall II.)*

**9:00  T02  K. Jungwirth**  
*Institute of Physics AS CR., Prague, Czech Republic*  
Nonlinear processes in laser plasma corona

**9:30  T04  P. Hartmann**  
*Research Institute for Solid State Physics and Optics HAS, Budapest, Hungary*  
Numerical experiments on complex plasmas: 2D Yukawa systems

**10:00  T06  A. Zagorodny**  
*Bogolyubov Institute for Theoretical Physics, Ukraine*  
Effective grane interaction in dusty plasmas: theoretical description and numerical simulation

**10:30** Coffee break

**11:00  T08  R.E. Robson**  
*Centre for Antimatter - Matter Studies, Australia*  
Kinetic and fluid modelling of plasmas and swarms

**11:30  T10  A. Fruchtman**  
*Holon Institute of Technology, Holon, Israel*  
Neutral depletion and transport in low pressure plasmas

**12:00  T12  H.C. Kim**  
*Pohang University of Science and Technology, Republic of Korea*  
Analytic modeling and kinetic simulation of high-frequency/multiple-frequency capacitively coupled plasmas

**12:30** Lunch
Workshop A  *(Top Congress Hall)*

14:00  WA1  K.H. Schoenbach  
Physics and applications of high power water switches

14:30  WA2  K. Yan  
All solid-switch pulsed-power source for electrohydraulic discharge plasmas

15:00  WA3  M. Sato  
Environmental and biotechnological applications of high-voltage pulsed discharge in water

15:30  Coffee break

16:00  WA4  B.R. Locke  
The formation of active chemical species in liquid and gas-liquid electrical discharges

16:30  WA5  P. Lukes  
The role of reactor and power supply design on chemical and physical processes in liquid and gas-liquid electrical discharges

17:00  WA6  B. Juettner  
Long-living plasmoids from a water discharge at atmospheric pressure

17:15  WA7  A. Belkind  
Pulsed electrical discharges in water: fundamentals and applications

17:30  WA8  O. Lesaint  
Degradation of organic molecules by streamer discharges in water: coupled electrical and chemical measurements

17:45  WA9  M. Magureanu  
Decomposition of methylene blue in water by corona discharges

18:00  Coffee break
Workshop B (Congress Hall II.)

14:00 WB1 J. J. Rocca
Dense plasmas for the generation of coherent soft X-ray light

14:30 WB2 E. Hotta
Optimization of capillary discharge condition for SXR and EUV sources

15:00 WB3 E. Wyndham
Compact capillary discharges as sources of EUV radiation and plasma jets: physics and applications

15:30 Coffee break

16:00 WB4 K. Kolacek
Exploding wire in water - a potential environment for amplification of spontaneous emission in soft X-ray region

16:30 WB5 H.-J. Kunze
Incoherent emission from capillary discharges

17:00 WB6 P. Zuppella
Recent progress in applications of the Ne-like Ar soft X-ray laser at L'Aquila University

17:15 WB7 N. S. Kampel
Towards nitrogen recombination soft X-ray laser scheme in a capillary discharge z-pinch

17:30 WB8 M. Vrbova
High gain prediction for soft x-ray laser pumped by plasma pinch in nitrogen capillary discharge

17:45 WB9 S.V. Zakharov
Plasma dynamics in hollow cathode triggered discharge with influence of fast electrons on ionization phenomena and EUV emission

18:00 Coffee break
18:30-20:00 Poster Session 3

**Topic number 10**

3P10-01 Fast imaging of oscillatory streamer discharge in dense air
A. Agneray, F. Auzas, M. Makarov, ...

3P10-02 Measurements and numerical simulations of fluorescent light spatial distributions for high pressure Ne and N₂ excited by 12 keV electron beams
A. Morozov, J. Wieser, R. Kruecken, A. Ulrich

3P10-03 Measurement of gas temperature and OH density in pulsed positive corona discharge
R. Ono, T. Oda

3P10-04 Simulation of discharge phenomena evolved at wire explosion in vacuum
R. B. Baksht, I.I. Beilis, V.I. Oreshkin, ...

3P10-05 Negative corona discharge fed by oxygen with electronegative gas impurities (N₂O)
J. Orszagh, J.D. Skalny, N.J. Mason

3P10-06 Comparison between a hydrogen - filled gap breakdown and a breakdown along exploding tungsten fine wire
A.G. Rousskikh, V.I. Oreshkin, A.Y. Labetsky, ...

3P10-07 Preliminary results in atmospheric pressure Ar-He microwave sustained discharges
J. Muñoz, I. Santiago, J. Luque, M.D. Calzada

3P10-08 Effect of gas heating on excimer distribution in DBD Xe excimer lamp
H. Akashi, A. Oda, Y. Sakai

3P10-09 Effect of surface charge on ignition of RF impulse discharge used for surface MgO coating in a small-diameter glass tube
T. Muraoka, S. Iizuka

3P10-10 Plasma characteristics in air and vapor bubbles in water
P. Bruggeman, J. Degroote, C. Leys, ...

3P10-11 Axial study of a neon surface-wave-sustained-discharge at atmospheric pressure
A. Sáinz, M.C. García, M. Sáez, M.D. Calzada
3P10-12 Characterization of microplasma jets at atmospheric pressure
J. A. Souza Corrêa, C. Oliveira, ...

3P10-13 Numerical investigations of the integral of specific action of current for electrically exploded wires
V.I. Oreshkin, S.A. Barengolts, S.A. Chaikovsky

3P10-14 Fundamental characteristics of microwave discharge type plasma source under atmosphere pressure
A. Kobayashi, Y. Takao, K. Komurasaki

3P10-15 Electrical and thermal characterisation of a very low power atmospheric pressure He plasma
S.D. Anghel, A. Simon

3P10-16 Ignition of hydrocarbon-containing mixtures by nonequilibrium plasma. Experiment and numerical modeling
N.L. Aleksandrov, S.V. Kindisheva, ...

3P10-17 Dynamics of relay electric breakdown along gas bubble chain in a liquid
Yu.S. Akishev, G.I. Aponin, M.E. Grushin, ...

3P10-18 Influence of negative ions on the humidity effect on the first corona inception
P. Ortéga, M. Rodiere, R. Diaz, ...

3P10-19 Atmospheric correction factor for impulse breakdown voltage
P. Ortéga, R.T. Waters, A. Haddad, ...

3P10-20 Study of homogeneous DBD with fine wire meshes and PET films in air at atmospheric pressure
T. Mao, Z. Guan, H. Luo, Z. Liang, X. Wang, ...

3P10-21 Properties of the MHCD in xenon
B.-J. Lee, H. Rahaman, K. Frank, L. Mares, ...

3P10-22 Gliding discharge oxidation of hydrocarbons in the process of waste destruction
T. Opalinska, E. Kowalska, J. Radomska, ...

3P10-23 Volumetric atmospheric pressure glow discharge maintained by self-sustained dc glow discharge in helium
V.I. Arkhipenko, Th. Callegari, L. Pitchford, ...
3P10-24 Atmospheric pressure air glow discharge in a three-electrode configuration
V.I. Arkhipenko, Th. Callegari, L. Pitchford...

3P10-25 Self absorbed lines analysis of a recombining laser induced metallic plasma
M. Ribiere, B.G. Cheron, ...

3P10-26 Spectroscopic study of the negative corona discharge in liquid and supercritical $^4$He
Z. Li, N. Bonifaci, A. Denat, V.M. Atrazhev, ...

3P10-27 Influence of the gas flow rate on the column length and the electron density in an argon surface wave sustained discharge at atmospheric pressure
J. Martinez-Aguilar, M.C. Garcia, ...

3P10-28 On the source of runaway electrons in a pulsed gas discharge
G.A. Mesyats

3P10-29 Optical and electrical characteristics of dielectric coplanar surface barrier discharge in nitrogen
M. Simek, T. Homola

3P10-30 Efficiency of ozone production by dielectric coplanar surface barrier discharge in synthetic air
M. Simek, T. Homola

3P10-31 Discharge in the gas channel with liquid walls as generator of non-thermal plasma at atmospheric pressure
I.V. Prysiazhevych, V.V. Yukhymenko, ...

3P10-32 Kinetic model analysis of C$_3$H$_8$ plasma for olefin synthesis in microplasma reactors
A. Agiral, C. Trionfetti, K. Seshan, ...

3P10-33 CN($B^2\Sigma^+\rightarrow X^2\Sigma^+$) violet system emission in a N$_2$-CH$_4$ atmospheric pressure dielectric barrier discharge
G. Scarduelli, P. Franceschi, G. Dilecce, ...

3P10-34 Generation and characteristics of rf discharge plasmas in contact with ionic liquids under low gas pressure
K. Baba, T. Kaneko, R. Hatakeyama
3P10-35 Electrohydrodynamic properties of surface dielectric barrier discharges in ambient air for aerodynamic airflow control
J. Pons, E. Moreau, G. Touchard

3P10-36 Atmospheric pressure RF discharge in argon: optical diagnostic, fluid model and applications
N. Balcon, A. Aanesland, G.J.M. Hagelaar,...

3P10-37 Degradation of persistent materials by pulsed barrier discharge generated in gas-liquid two-phase flow
K. Yasuoka, H. Katayama, S. Ishii

3P10-38 Positive point-to-plane corona discharge in air: electrical and optical analysis
N. Merbahi, O. Eichwald, M. Yousfi,...

3P10-39 Characteristics of dielectric barrier discharge reactor for material treatment
K.G. Kostov, R.Y. Honda, M.E. Kayama,...

3P10-40 UV emissions from an unipolar sub-µs pulsed DBD in He-Air mixtures
A.V. Pipa, M. Schmidt, K. Becker

3P10-41 The ozone generation in positive and negative DC corona discharges fed by dry oxygen: Effect of gas flow rate
J. Országh, G. Horváth., S. Matejčík,...

3P10-42 An immersed boundary method to simulate positive streamer propagation in point-to-plane geometry in air
B. Zeghondy, S. Celestin, A. Bourdon,...

3P10-43 A chemical model for the atmospheric pressure plasma reforming of methane with oxygen
N.S. Matin, J.C. Whitehead

3P10-44 Atomic oxygen density in the effluent of an RF-excited atmospheric pressure plasma jet: Measurements, modelling, mechanisms
S. Reuter, K. Niemi, H.F. Doebele,...

3P10-45 Structure formation in a DC-driven "barrier" discharge: stability analysis and numerical solutions
U. Ebert, I.R. Rafatov, D.D. Sijacic
3P10-46 Comparison of the classical integral model with Eddington approximation and Helmholtz equation based models for photoionization produced by non-thermal gas discharges in air
A. Bourdon, V.P. Pasko, N.Y. Liu, ...

3P10-47 The effect of diluting gas on hydrocarbons decomposition in gliding discharge
T. Opalinska, B. Ulejczyk, S. Pawlowski

3P10-48 Chemistry of methane-nitrogen in a dielectric barrier discharge at atmospheric pressure
Scarduelli G., Franceschi P., Guella G., ...

3P10-49 Chemical processes in nitrogen-benzene plasmas at atmospheric pressure
P. Franceschi, G. Guella, G. Scarduelli, ...

3P10-50 Sliding discharge study in axisymmetric configuration
N. Zouzou, K. Takashima, E. Moreau, ...

3P10-51 Near room-temperature sub-microsecond pulsed plasma jet in flowing atmospheric argon
J. L. Walsh, M. G. Kong

3P10-52 Experimental investigation of subnanosecond gas breakdown in the E/p range $10^3$ to $10^5$ V/cm torr
H. Krompholz, L. Hatfield, A. Neuber, ...

3P10-53 On the interaction of UV light with the surface charge in N$_2$ surface DBD
S. de Benedictis, P.F. Ambrico, G. Dilecce, ...

3P10-54 Transient spark discharge in N$_2$/CO$_2$/H$_2$O mixtures at atmospheric pressure
M. Janda, Z. Machala

3P10-55 DBD for aerodynamic flow control: numerical investigation and coupling with computational fluid dynamics
T. Unfer, Y. Lagmich, F. Rogier, F. Thivet, ...

3P10-56 High-voltage pulsed discharge along the water surface. Electric and spectral characteristics
A. Anpilov, E. Barkhudarov, V. Kop’ev, ...

3P10-57 Spectral analysis of the light emitted from streamers in liquid CCl$_4$
S. Ingebrigtsen, N. Bonifaci, A. Denat, ...
3P10-58 Characterization of plasma needle with an additional grounded ring 
S. Lazovic, N. Pucač, G. Malovic, ...

3P10-59 Seed electron model for Monte Carlo HPM breakdown model 
A.A. Neuber, G.F. Edmiston, H.G. Krompholz

3P10-60 Numerical simulation and comparison with experiment for a positive point to plane corona discharges in dry air 
O. Ducasse, O. Eichwald, M. Yousfi, ...

3P10-61 Numerical simulations of atmospheric pressure dielectric barrier discharges in He at different operating conditions 
T. Martens, A. Bogaerts, W.J.M. Brok, ...

3P10-62 Plasma discharges at atmospheric pressure for boundary layer separation control and neutral flow propulsion 
A.A. Martins, M.J. Pinheiro

3P10-63 Temporal and spatial evolution of the reactive species in a pulsed-DBD in He 
A.S. Chiper, R. Cazan, V. Pohoata, G. Popa

3P10-64 Parallel operation of micro-hollow-cathode sustained discharge 
M. Maeyama, A. Ishigaya, Y. Takamine, ...

3P10-65 Large-scaled line plasma production by evanescent microwave in a narrow rectangular waveguide 
E. Abdel Fattah, M. Suzuki, Y. Kitamura, ...

3P10-66 Corona discharge and flow characteristics of wire-plate type electrohydrodynamic gas pumps: ground plate convergent angle effect 
J.S. Chang, H. Tsubone, N. Buenconsejo Jr, ...

3P10-67 The two-dimensional spectroscopic investigation of the development of the coplanar dielectric barrier discharge in synthetic air at atmospheric pressure 
T. Hoder T., M. Šíra, K.V. Kozlov, ...

3P10-68 Ozone generation by micro-plasma devices: feasibility study 
A. Fateev A., E. Stamate, P. Michelsen
3P10-69 Creation of DC diaphragm discharge in electrolytes
Z. Stara, F. Krcma, P. Slavicek, V. Aubrecht

3P10-70 Breakdown of the DC diaphragm discharge in selected water solutions
J. Prochazkova, Z. Stara, F. Krcma

3P10-71 Optical emission spectroscopy of the barrier torch discharge
M. Chichina, O. Churpita, Z. Hubicka,...

3P10-72 Numerical study of microhollow cathode discharges: influence of discharge geometry on the current–voltage characteristic
K. Makasheva, J.-P. Boeuf, L.C. Pitchford

3P10-73 Collective effect in the streamer ignition of surface discharges
K. Allegraud, O. Guaitella, A. Rousseau

3P10-74 Properties of back ionisation cold plasma reactor with gas permeable electrodes
R. Kacprzyk, W. Mista

3P10-75 Atmospheric pressure discharge in coaxial type electrodes operated with DC voltage
A. Ando, T. Kumagai, K. Hattori, M. Inutake

3P10-76 Measurements and simulations of the ionic wind produced by a DC corona discharge between cylindrical wires
P. Berard, D.A. Lacoste, C.O. Laux

3P10-77 Influence of electrode temperature on plasma parameters of diffuse coplanar surface discharge
J. Čech, A. Brablec, P. Stahel, M. Cernak

3P10-78 Memory effect on the spatio-temporal self-organization of streamers in a DBD
S. Celestin, G. Canes-Boussard, ...

3P10-79 Application of back ionisation phenomenon in a construction of cold plasma reactors
R. Kacprzyk, W. Mista

3P10-80 Transmission-line analysis of streamers and leaders
R.F. Fernsler, M. Lampe, S.P. Slinker,...
3P10-81 Optically transparent microplasma devices and arrays fabricated by polymer-based replica molding
S.-J. Park, M. Lu, J. Zheng, T.S. Anderson, ...

3P10-82 Comparative spectroscopic study of dielectric barrier discharge in rare gases
G. Ledru, N. Merbahi, N. Sewraj, F. Marchal

3P10-83 Nonequilibrium atmospheric pressure plasma jets with a single electrode and their applications to chemical reactions and sterilization
K. Kitano, H. Furusho, Y. Nagasaki,...

3P10-84 Spatial-time modulations of VUV-VIS emission of high pressure pulsed volume discharge in argon
A.A. Lissovski, A.B. Treshchalov

3P10-85 Study of the reactivity of a microplasma
X. Aubert, A. Pipa, J. Röpcke, A. Rousseau

3P10-86 Pulsed corona investigations with a wide parameter range
T.M.P. Briels, E.M. van Veldhuizen,...

3P10-87 Characterization of discharges in atmospheric pressure air at 300-1000 K generated by nanosecond pulses repetitively applied at 2-30 kHz

3P10-88 An atmospheric pressure coaxial DBD reactor under bi-polar pulsed HV excitation
E. Panousis, F. Clement, K. Proimadis,...

3P10-89 Comparison between experimental and modelling results of an atmospheric pressure N₂ DBD discharge under 130 kHz sinusoidal excitation
E. Panousis, L. Papageorghiou, N. Spyrou,...

3P10-90 Light emission characteristics of micro-discharge array devices
J. Waskönig, D. O’Connell, J. Winter,...

3P10-91 Electrical and optical observations of an RF-driven micro-discharge source and plume
C.M.O. Mahony, T. Ėans, W.G. Graham,...
3P10-92 Optimization of large-scale DBD plasmas: Mechanism and implications for improved ozone generation
G. Vezzu, R. Merz, R. Gisler, B. Paolini,....

3P10-93 The effects of methane contamination in dielectric barrier discharge ozone generators
J. Lopez, G. Vezzu, A. Freilich, L. Pitchford,....

3P10-94 Electrical and emission studies of a large area, uniform dielectric barrier discharge operating in polymer film processing mode
W.G. Graham, D. Della Croce, A.M. Hynes,....

3P10-95 Underwater discharge and water filled capillary discharge
P. Ceccato, A. Rousseau

3P10-96 Discharge plasmas generated by piezoelectric transformer and their applications: material effect of dielectric barrier electrode on ozone generation
K. Teranishi, H. Itoh, N. Shimomura, S. Suzuki

3P10-97 Characterization of a low current-high voltage air arc discharge at high pressure
G. Petitpas, J. Gonzalez-Aguilar, A. Darmon,....

3P10-98 Generation of DC-driven non-thermal plasma in atmospheric pressure air
J. Choi, T. Namihira, S. Katsuki, H. Akiyama

**Topic number 15**

3P15-01 OH molecular based barrier discharge lamp
E.A. Sosnin, S.M. Avdeev, V.F. Tarasenko

3P15-02 Generation of halogen dimers emission in dielectric barrier discharge
E.A. Sosnin, S.M. Avdeev, V.F. Tarasenko

3P15-03 Multi-wavelength dielectric barrier discharge excilamp with a mixture of krypton, chlorine, and bromine
E.A. Sosnin, S.M. Avdeev, V.F. Tarasenko

3P15-04 A high power (50 MW), broadband (50%) plasma-aided microwave amplifier
I. Bogdankevich, I. Ivanov, O. Loza,....
3P15-05 Heavy ion beam pumped excimer lasers  
*A. Ulrich, A. Adonin, D.H.H. Hoffmann,*...

3P15-06 Effect of beam pre-modulation on gain and efficiency in Cerenkov free electron laser  
*Suresh C. Sharma, Anuradha Bhasin*

3P15-07 High gain prediction for soft x-ray laser pumped by plasma pinch in nitrogen capillary discharge  
*P. Vrba, K. Koláček, J. Schmidt, A. Jančárek*

3P15-08 Low pressure (rare gas + water vapor)-discharge as a light source: (1) spectra and efficiency  
*E. Artamonova, T. Artamonova, A. Beliaeva,*...

3P15-09 Low pressure (rare gas + water vapor)-discharge as a light source: (2) electrical characteristics  
*E. Artamonova, T. Artamonova, A. Beliaeva,*...

3P15-10 Towards nitrogen recombination soft X-ray laser scheme in a capillary discharge z-pinch  
*N.S. Kampel, A. Rikanati, I. Be'ery, U. Avni,*...

3P15-11 Discharge characteristics of MgO thin films deposited by sputtering  
*T. Misu, M. Sugimoto, Namie M., Goto M,*...

3P15-12 Absorption and emission spectra of gaseous indium monohalides  
*A. Koerber, D. Hayashi*

3P15-13 Dynamics and gain prediction for nonequilibrium plasma in low-inductive discharges  
*V.A. Burtsev, N.V. Kalinin, P. Vrba, M. Vrbová*

3P15-14 Compact pulse power generator for X-pinches researches  
*N. Ratakhin, V. Feduschak, A. Erfort,*...

3P15-15 Development of multi metallic emission array using micro hollow cathode plasma  
*T. Ohta, Y. Tachibana, M. Ito, S. Takashima,*...

3P15-16 Emission spectra of discharge in sapphire and alumina capillaries filled by argon or nitrogen  
*M. Tamáš, A. Jančárek, M. Nevrkla,*...
3P15-17 The effect of discharge mode on Ba atom loss from the electrode of a low-pressure fluorescent lamp
T. Ueda, Y. Egashira, A. Samir, Y. Yamagata...

3P15-18 Observation of discharge patterns in a coaxial dielectric barrier discharge
Hasina Khatun, M. Kumar, A. K. Sharma,...

3P15-19 Breakdown in xenon model discharge lamps
S. Peters, S. Hadrath, M. Wendt, A. Kloss,...

3P15-20 Numerical simulation of the attachment of high intensity discharges at tungsten cathodes
F.H. Scharf, O. Langenscheidt, J. Mentel

3P15-21 Large scale arrays of microcavity plasma devices based on self-assembled ring electrodes and interconnects

3P15-22 Soft X-ray emission from a plasma focus of hundreds joules
P. Silva, J. Moreno, C. Pavez, J. Arancibia,...

3P15-23 Low-pressure microwave discharge in an Ar/Hg mixture as a UV source
E.M. Barkhudarov, I.A. Kossyi, N.I. Malykh,...

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3P17-20 Cherenkov beam-wave interaction experiment with a pulse-powered pseudospark discharge
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3P17-21 New generation of high – power semiconductor closing switches for pulsed power applications
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Post deadline contributions

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PD-02 Physical characteristics of atmospheric pressure glow discharge with liquid electrolyte cathode (water and CuCl2 solutions)
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PD-03 Plasma treatment of microfluidic components
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PD-04 Modeling parametric scattering instabilities in large-scale expanding plasmas
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PD-05 Describing diffusion in a magnetized plasma with a self consistent friction approach
  K. Peerenboom, J.J.A.M. van der Mullen,...
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Topical Invited Lectures (Top Congress Hall)

9:00  T13  M.D. Bowden  
The Open University  Milton Keynes, UK  
Electric field measurements by laser spectroscopy

9:30  T15  T. Nakano  
National Defense Academy, Yokosuka, Japan  
Diagnostics of N₂ and O₂ dissociation in RF plasmas by vacuum ultraviolet emission and absorption spectroscopy

10:00  T17  Y.-K. Pu  
Tsinghua University, Beijing, China  
Using OES to determine electron temperature and density in low pressure nitrogen and argon plasmas

10:30  Coffee break

11:00  T19  D. Graves  
University of California, Berkeley, USA  
Molecular dynamics and beam studies of plasma-surface interactions

11:30  T21  E. Tatarova  
Centro de Fisica, Lisboa, Portugal  
Microwave discharges in molecular gases driven by surface waves

12:00  T23  D. O’Connell  
Ruhr University Bochum, Bochum, Germany  
Exotic phenomena in plasmas at extremely low pressure

12:30  T25  K. Ronald  
University of Strathclyde, Glasgow, Scotland  
Laboratory experimental investigations of the mechanism for Auroral Kilometric Radiation Emission

13:00  Lunch

14:00  Excursions
Topical Invited Lectures (*Congress Hall II.*)

9:00 T14  **N.R. Ray**  
*Saha Institute Of Nuclear Physics, Kolkata, India*  
Synthesis of diamond like carbon films for various applications

9:30 T16  **A. Descoeudres**  
*EPFL – CRPP, Lausanne, Switzerland*  
Time- and spatially-resolved characterization of electrical discharge machining plasma

10:00 T18  **D.C. Cameron**  
*ASTRaL, Mikkeli, Finland*  
Time and space resolved electron temperature distribution in a Penning-type opposed target magnetron during pulsed DC sputtering

10:30 Coffee break

11:00 T20  **J. van Dijk**  
*Eindhoven Univ. of Technology, The Netherlands*  
Plasma modelling with Plasimo – design and applications

11:30 T22  **M. Radmilovic-Radjenovic**  
*Institute of Physics, Belgrade, Serbia*  
Modeling of the gas breakdown and plasma etching

12:00 T24  **F. Pegoraro**  
*University of Pisa, Pisa, Italy*  
Active Magnetic Experiment : a magnetic bubble in the ionospheric stream

12:30 T26  **B. Potapkin**  
*Kintech, Moskow, Russia*  
Multiscale multiphysics non-empirical approach to the modeling of chemically active non-equilibrium plasmas

13:00 Lunch

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THURSDAY, July 19

General Invited Lectures (Top Congress Hall)

9:00  G05  M.J. Sadowski  
*The Andrzej Soltan Institute for Nuclear Studies, Otwock-Swierk n. Warsaw, Poland*
The main issues of research on dense magnetized plasmas

9:45  IUPAP Early Career Award in Plasma Physics and Von Engel Award Ceremonies

10:15  Von Engel Prize Lecture

**N. Sato**  
*Tohoku University, Japan*
Some basic plasma experiments extended in plasma applications

11:00  Coffee break

11:30  G06  Yu.P. Raizer  
*Institute for Problems in Mechanics, Moscow, Russia*
Corona initiated from grounded objects under thunderstorm conditions and its influence on lightning attachment

12:15  G07  H. Stoeri  
*Vienna University of Technology, Wien, Austria*
On-line monitoring of plasma processes for surface treatment by spectroscopic ellipsometry

13:00  Lunch
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  *J. Hildebrandt* |
| **4P06-02** Studies on a low energy plasma focus discharge  
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| **4P06-03** Bimodal argon ion velocity distribution functions downstream of an expanding helicon source plasma  
  *I.A. Biloiu, E.E. Scime, C. Biloiu, S.A. Cohen* |
| **4P06-04** Thomson scattering diagnostics of the hollow-anode plasma  
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| **4P06-05** Measurement of the degree of dissociation in inductively coupled nitrogen discharges by optical emission actinometry  
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| **4P06-06** Using the PC as a distortion meter for obtaining EEDF in glow discharge plasma  
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| **4P06-07** Development of compact optical emission spectroscopy system for nitrogen atom density measurement  
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| **4P06-08** Metastable oxygen atom velocity and temperature in expanding CO₂ plasma jets  
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| **4P06-09** Transition of single probe to double probe characteristics: Effect of finite electrode area ratio  
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4P11-16 Modelling of near-cathode layers in high-pressure arc discharges
N.A. Almeida, M.S. Benilov, G.V. Naidis

4P11-17 Gaseous Thermionic Vacuum Arc (G-TVA) – a new method for carbon film deposition from evaporating liquids or gases
G. Musa, R. Vladoiu, G. Prodan,...

4P11-18 Modeling of a high current vacuum arc in a transverse magnetic field and influence of the electrode gap on the arc motion
T. Delachaux, O. Fritz, D. Gentsch,...

4P11-19 Influence of thermal non-equilibrium on air and water plasma composition
H. Hingana, Ph. Teulet, Y. Cressault,...
4P11-20 Mode changes on thermionic cathodes: I. Sensitivity study
A. S. Benilov, M. D. Cunha

4P11-21 Mode changes on thermionic cathodes: II. Preventing transient spots
P. G. C. Almeida, A. S. Benilov, M. D. Cunha

4P11-22 Processes in Gerdien arc generated by hybrid gas-water torch
T. Kavka, O. Chumak, V. Sember, ...

4P11-23 Measurement of excitation and ionization temperatures in an expanding H₂O-Ar DC arcjet
V. Sember, A. Maslani

**Topic number 14**

4P14-01 An alternative source to produce hydrogen from alcohols by using an argon surface wave sustained discharge at atmospheric pressure
M. Jiménez, C. Yubero, I. Santiago, ...

4P14-02 Characteristics of atmospheric pressure corona torch plasmas for material processing
J. Markle, C. Q. Xu, J. S. Chang.

4P14-03 Decomposition treatment of CO₂ using gas tunnel type plasma jet
A. Kobayashi, H. Hamanaka

4P14-04 Hydrogen production from water by using an argon microwave plasma at atmospheric pressure: preliminary study
M. Pineda, I. Santiago, J. Muñoz, C. Yubero, ...

4P14-05 Low current gliding discharges between parallel rails in normal-air flux
A. Risacher, S. Larigaldie, G. Bobillot, ...

4P14-06 Improvement of uniformity in heat flux transported to anode by magnetically driven arc
I. Kuno, T. Yamamoto, K. Takeda, T. Toh, ...

4P14-07 Experimental research of air gasification of waste. The first results
A. N. Bratsev, I. L. Glezin, ...
4P14-08 Partial oxidation of methane with yttria-stablized zirconia catalyst in a dielectric barrier discharge
   A. Indarto, J.W. Choi, H. Lee, H. Sekiguchi, ...

4P14-09 Quasi-DC discharge in high-speed flow for combustion enhancement
   S.B. Leonov, D.A. Yarantsev

4P14-10 Single wall carbon nanotubes synthesis via electric arc process: influence of some parameters on the yield
   A. Mansour, M. Razafinimanana, ...

4P14-11 Electric field effects for combustion control - optimized geometry
   D. Most, T. Hammer, G. Lins, D.W. Branston, ...

15:30 Coffee break
16:00-17:30 Poster Session 5

Topic number 7

5P07-01 Excitation of dust density waves in dusty plasmas of planetary rings
V.V. Yaroshenko, F. Verheest, G.E. Morfill

5P07-02 Numerical solutions of the balance-equations in the three-dimensional high-latitude ionospheric model
I.A. Golikov, V.I. Popov, T.N. Solovyev

5P07-03 A magnetic field mechanism for the origin of planetary motion
J.J. Lowke, R.J. Lowke

5P07-04 The influence of (n-n')-mixing processes in \( \text{He}^*(n) + \text{He}(1s^2) \) collisions on \( \text{He}^* \) (n) atoms population of in weakly ionized non-equilibrium helium plasmas
Z. Djurič, Lj. M. Ignjatović, A. A. Mihajlov, ...

5P07-05 Drift wave excitation by inhomogeneous plasma flow in solar spicules
J. Vranjes, H. Saleem, S. Poedts

5P07-06 The obtaining of the ball lightning and the prospects of the using it for problem of nuclear fusion
A.G. Oreshko

5P07-07 About domain structure, fields and processes in radiating stars and in Universe
A.G. Oreshko

5P07-08 Problem of Alfvén waves in solar photosphere
J. Vranjes, S. Poedts, B.P. Pandey

5P07-09 3D PiC modelling of a experiment to investigate Auroral Kilometric Radiation mechanisms
K.M. Gillespie, D.C. Speirs, S.L. McConville, ...

5P07-10 Observations of magnetosheath fluctuations
O. Gutynska, J. Safrankova, Z. Nemecek

5P07-11 Observations of vortex-like structure near the cusp
O. Tkachenko, J. Safrankova, Z. Nemecek, ...
5P07-12 Air heating associated with transient luminous events
V.P. Pasko, A. Bourdon

5P07-13 Finite amplitudes helical waves on the surface of the sunspots as an example of the self-exciting homopolar heterogeneous dynamo
V.V. Glazkov, O.A. Sinkevich

5P07-14 High-latitude bow shock: Tilt angle effects
K. Jelinek, Z. Nemecek, J. Safrankova

5P07-15 Electron-drift driven mode in the solar atmosphere
D. Petrović, J. Vranjes, S. Poedts

**Topic number 8**

5P08-01 Revisiting the Bohm criterion for a plasma with two positive ion species
R.N. Franklin

5P08-02 Radial distribution of the excessively Doppler broadened hydrogen Balmer alpha line in a titanium hollow cathode glow discharge
N.M. Šišović, G.Lj. Majstorović, N. Konjević

5P08-03 Radial distribution of the excessively Doppler broaded deuterium Balmer alpha line in a titanium hollow cathode glow discharge
G.Lj. Majstorović, N.M. Šišović, N. Konjević

5P08-04 Investigation of energy flux density at a substrate in a pulsed DC magnetron discharge
M. Čada, G.C.B. Clarke, P.J. Kelly, ...

5P08-05 Electron distribution function in R-striations in an inert gas discharge
Yu.B. Golubovskii, A.Yu. Skoblo, C. Wilke, ...

5P08-06 Evaluation of EEDF in microwave discharge plasma by spectroscopic characteristics
J. Mizuochi, H. Matsuura, H. Akatsuka

5P08-07 Production of a hollow-type magnetron RF discharge plasma and its application to deposition of carbon related materials
J. Emi, S. Iizuka
5P08-08 Influence of second-kind collisions on the electron distribution function in a He-Xe dc discharge
Yu.B. Golubovskii, F. Sigeneger, ...

5P08-09 Plasma decay in N₂, CO₂ and H₂O excited by high-voltage nanosecond discharge
N.L. Aleksandrov, S.V. Kindisheva, ...

5P08-10 On re-evaporation of barium and electrical conduction in its vapor in photoplasma studies
A. Majumder, B. Jana, V.K. Mago, ...

5P08-11 Time-resolved Langmuir probe diagnostics of high-power pulsed dc magnetron discharges during deposition of copper films
A.D. Pajdarova, J. Vlcek, P. Kudlacek, ...

5P08-12 Experimental investigation on the instability of the positive column in oxygen
H. Testrich, Ch. Wilke, R. Reimer, ...

5P08-13 Spatial and temporal distributions of argon metastable atom densities in high-pressure magnetron sputtering plasmas
N. Nafarizal, N. Takada, K. Nakamura, ...

5P08-14 Transport properties of the electron component in oxygen plasmas
G.K. Grubert, D. Loffhagen, F. Sigeneger

5P08-15 Effect of applied voltage property on ignition voltage of fluorescent lamp under light irradiation
M. Hamamoto, S. Kai, T. Haizaki, ...

5P08-16 Study of a switched dc electrical discharge operating as plasma antenna
O.S. Stoican

5P08-17 Experimental and theoretical investigations of a helium-xenon discharge in spot mode
J. Winter, H. Lange, I.A. Porokhova, ...

5P08-18 Triple probe measurements in a pulsed magnetron discharge
P.M. Bryant, S.A. Voronin, A. Vetushka, ...

5P08-19 VHF discharge sustained in a small hole
K. Koga, W.N. Nakamura, M. Shiratani
5P08-20 Model of reactive magnetron sputtering process with non-uniform discharge current density
P. Vašina, T. Hytková, M. Eliáš

5P08-21 Experimental observations in a Titanium z-pincho plasma
E. Wyndham, M. Favre, P. Valdivia

5P08-22 Low-pressure breakdown and voltage-current characteristics of dc discharge in CF₄
N. Škoro, G. Malovič, D. Marić, Z. Lj. Petrović

5P08-23 The influence of an external magnetic field on a "macro" hollow cathode discharge in argon

5P08-24 Dependence of electrical breakdown mechanisms on gas electronegativity
B. Lončar, M. Vujisić, D. Arandić,...

5P08-25 Mechanisms of electrical breakdown in vacuum diodes
B. Lončar, M. Vujisić, K. Stanković,...

5P08-26 Impedance of an oxygen DC-discharge
A. Richter, H. Testrich, Ch. Wilke,...

5P08-27 Spatial velocity and flux distributions of sputtered Ti atoms determined by using blue diode laser in a low pressure magnetron discharge
C. Vitelaru, L. de Poucques, T.M. Minea,...

5P08-28 N atom diagnostics in pulsed RF discharges
J. Jašík, J. Krištof, V. Martišovič,...

5P08-29 Study of nitrogen molecular systems observed in NIR spectra in DBD at near and over atmospheric pressure
P. Čermák, J. Varga, P. Macko,...

5P08-30 Influence of reactor geometry in capacitively coupled neutral loop discharges (CCP-NLD)
M. Vural, F. Sirin, R.P. Brinkmann

5P08-31 Comparative study of density profiles in two divertor plasma simulators: DiPS and MP²
H.-J. Woo, K.-S. Chung, H.-J. You, T. Lho,...

5P08-32 Drift and wave phenomena in an inductively coupled magnetic Neutral Loop Discharge
D.L. Crintea, T. Ishijima, H. Sugai,...
**Topic number 9**

5P09-01 General dispersion relation for microwave gas breakdown in the presence of static magnetic field
*M. Ghorbanalilu*

5P09-02 Excitation of whistler modes by a loop antenna in helicon discharge plasmas
*V.A. Es’kin, A.V. Kudrin*

5P09-03 Temperatures of H(n=2) and D(n=2) in H₂, D₂, and H₂/D₂ mixture plasmas excited by helicon-wave discharges
*K. Sasaki, Y. Okumura*

5P09-04 Dissociative mode of RF capacitive discharge in low-pressure SF₆
*V. Lisovskiy, J.-P. Booth, J. Jolly, ...*

5P09-05 Plasma production using one turn internal loop antenna by means of radio frequency discharge
*H. Fujita, K. Aramaki, Y. Ohtsu*

5P09-06 Nonlinear spatial profiles of plasma parameters in a magnetized inductive radio-frequency discharge
*S. Popescu, Y. Ohtsu, H. Fujita*

5P09-07 Transition phenomena and striations in inductively coupled radio-frequency plasma studied by optical emission spectroscopy
*N. Čutić, N. Glavan, S. Milošević, ...*

5P09-08 Operating stability diagram for the plasma needle used as deactivation agent for E. Coli bacteria
*A. Simon, S.D. Anghel, J. Papp*

5P09-09 Modes of low-pressure longitudinal combined (RF/DC) and dual-frequency discharges
*V. Lisovskiy, J.-P. Booth, N. Kharchenko, ...*

5P09-10 The role of the capacitive component in the low pressure RF inductive discharge
*A.F. Alexandrov, K.V. Vavilin, ...*

5P09-11 One more mechanism leading to the hysteresis of the RF inductive discharge transition from low to high density mode
*A.F. Alexandrov, K.V. Vavilin, ..., ...*
5P09-12 Study of a radio frequency plasma for production of equivalents of Titan's aerosols
M. Cavarroc, G. Alcouffe, L. Boufendi, ... 

5P09-13 About the electron stochastic heating in the capacitively coupled low-pressure discharge
M. Tatanova, Yu.B. Golubovskii, ... 

5P09-14 Evidence for nanoparticles in microwave-generated fireballs by synchrotron X-ray scattering
J.B.A. Mitchell, J.L. LeGarrec, M. Sztucki, ... 

5P09-15 Theoretical study of ion energy distribution function in dual frequency RF discharges
V.V. Ivanov, A.S. Kovalev, D.G. Voloshin, ... 

5P09-16 Analytical calculation of ion energy distribution function in dual frequency RF discharges
M.A. Olevanov, D.G. Voloshin, ... 

5P09-17 Studies on a microwave-heated plasma torch
M. Leins, K.-M. Baumgaertner, A. Schulz, ... 

5P09-18 Heavy particle impact excitation of atomic oxygen in front of the powered electrode of oxygen rf plasmas - Experiment and PIC-simulation
K. Dittmann, K. Matyash, F.X. Bronold, ... 

5P09-19 Spatial and phase resolved optical emission pattern in sheath region of capacitive coupled RF plasmas
S. Nemschockmichal, K. Dittmann, ... 

5P09-20 Atmospheric pressure microwave H2O plasma source and its solid surface cleaning application
M. Unno, S. Ono 

5P09-21 Experimental study of dual frequency RF discharges in argon for different gas pressures
O.V. Braginsky, D.G. Voloshin, ... 

5P09-22 Production of N2+ in positive column of HF discharge in He/N2 mixture
J. Raud, M. Laan 

5P09-23 Production of hydrogen using atmospheric pressure microwave plasma source operated at high flow rate
M. Jasinski, M. Dors, J. Mizeraczyk
5P09-24 RF-biasing of highly idealized plasmas
*R.H.J. Westermann, M.A. Blauw,*…

5P09-25 Mechanism of microwave guiding and plasma generation in below cutoff dimensions
*S. Bhattacharjee, J.V. Mathew,*…

5P09-26 Evolution of electron temperature and density distributions in the inter-electrode gap of DF CCP discharge during the RF period
*O.V. Braginsky, D.G. Voloshin,*…

5P09-27 Electron diffusion in intense high frequency electromagnetic fields
*S. Bhattacharjee, I. Dey, S. Jain, H. Amemiya*

5P09-28 Large low pressure, high power RF sources for negative hydrogen ions for fusion applications
*U. Fantz, P. Franzen, H.D. Falter, W. Kraus,*…

5P09-29 Measurement of ions in H₂ - N₂ capacitively coupled discharge
*P. Dvořák, J. Janča*

5P09-30 High-density microwave plasma spots produced by multi-hollow window technique
*S. Nakao, H. Sugai*

5P09-31 Electron production processes in neon RF breakdown
*N. Sasaki, M. Shoji, Y. Uchida*

5P09-32 Comparison of RF barrier discharge generated by plasma pencil and low frequency variant at atmospheric pressure
*P. Slavicek, A. Brablec, V. Kapicka,*…

5P09-33 Microwave surface-wave excited plasma as a source of high energy electron beam for polymer cross-linking
*J. Husarik, T. Sahara, M. Siry, M. Kando*

5P09-34 High frequency behaviour of dual frequency capacitively coupled plasmas
*E. Semmler, P. Awakowicz, D. Ziegler,*…

5P09-35 On the skin effect in symmetrically driven RF discharges
*T. Mussenbrock, T. Hemke, D. Ziegler,*…
5P09-36 Influence of discharge tube wall thickness on surface-wave discharge parameters
D. Czylkowski, H. Nowakowska,

5P09-37 Electron dynamics in capacitively coupled RF discharges
J. Schulze, B.G. Heil, D. Luggenhoelscher,

5P09-38 Space and phase resolved electron energy distribution functions in an industrial dual-frequency capacitively coupled radio-frequency discharge
J. Schulze, T. Gans, D. O’Connell,

5P09-39 Observation of transient electron density rise in an afterglow H₂ plasma with confined capacitive radio-frequency source
C. Gaman, S.K. Karkari, A.R. Ellingboe

5P09-40 Experimental investigation of a low pressure RF CO₂ plasma: Towards a new chemical kinetic scheme of the martian re-entry
C. Rond, A. Bultel, P. Boubert, C. Fryer,

5P09-41 A spectroscopic investigation of a water-vapor microwave plasma source
E. Tatarova, F.M. Dias, B. Gordiets,

5P09-42 Microwave air plasma torch
B. Gordiets, E. Tatarova, J. Henriques,

5P09-43 Selective emission of a two-lines spectrum in AC plasmas
G. Musa, C. Surdu-Bob, R. Vladoiu

5P09-44 Modelling of a large-scale N₂-Ar microwave plasma source
J. Henriques, E. Tatarova, C.M. Ferreira

5P09-45 Window breakdown: transition from vacuum multipactor to collisional microwave discharge
J.P. Verboncoeur, H.C. Kim, Y.Y. Lau

5P09-46 Atmospheric N₂ - Ar wave driven discharge
J. Henriques, E. Felizardo, E. Tatarova,

5P09-47 Surface wave driven microwave plasma torch
E. Felizardo, J. Henriques, E. Tatarova,

5P09-48 Radio-frequency dielectric-barrier glow discharges in atmospheric argon
J.J. Shi, D.W. Liu, M.G. Kong
**Topic number 12**

5P12-01 Dust particle charging in DC glow discharge plasma
   *G.I. Sukhinin, A.V. Fedoseev,...*

5P12-02 Kinetic description of attraction of likely charged grains in dusty plasmas
   *V.N. Tsytovich*

5P12-03 Velocity autocorrelation functions of dusty particles obtained by the Langevin dynamics
   *T.S. Ramazanov, K.N. Dzhumagulova,...*

5P12-04 Damping of Langmuir- and ion-acoustic waves due to charge spread on dust particles using a Bhatnagar-Gross-Krook-like term for dust particle charging
   *Alf H. Oien*

5P12-05 Long-living plasmoids from a water discharge at atmospheric pressure
   *B. Juettner, S. Noack, A. Versteegh,...*

5P12-06 Numerical simulations of interactions of warm plasmas and a dust-grain
   *W. Miloch, H.L. Pécseli, J. Trulsen*

5P12-07 Analysis of the particle vibrations in 3D plasma clusters
   *T. Antonova, B.M. Annaratone,...*

5P12-08 Charging and shielding of an emitting dust grain in weakly-ionized plasma in hydrodynamic approximation
   *L.G. D’yachkov, A.G. Khrapak, S.A. Khrapak*

5P12-09 Structures and charge of dust particles in gas discharges at cryogenic temperatures
   *S. Antipov, E. Asinovskii, A. Kirillin,...*

5P12-10 Three dimensional diagnostics of dusty plasma structures in glow discharge
   *K.B. Statsenko, Yu.V. Khrustalyov,...*

5P12-11 Variations of field emission from dust grains
   *J. Pavlíč, I. Richterová, J. Šafářková,...*

5P12-12 Void dynamics and dust particles distribution in complex reactive RF plasmas
   *I. Stefanović, E. Kovačević, J. Bernd, J. Winter*
5P12-13 Ion flow characteristics in experiments with dusty plasma structures
   S. Antipov, S. Maiorov

5P12-14 Rotation of a nanoparticle cloud in an inductively coupled plasma induced by weak static magnetic fields
   M. Schulze, A. Consoli, A. von Keudell,...

5P12-15 Ar+ treatment influence on secondary electron spectra from dust grains
   I. Richterová, D. Fujita, J. Pavlů,...

5P12-16 Kinetic processes in combustion dusty plasma
   A.M. Starik, A.M. Savel’ev, N.S. Titova

5P12-17 The influence of the gas mixture on the material properties of plasma polymerized nanoparticles
   E. Kovačević, J. Berndt, I. Stefanović,...

5P12-18 Size-dependent effect of nanoparticles on capacitively coupled radio frequency discharge
   I.V. Schweigert, F.M. Peeters

19:00 Banquet
FRIDAY, July 20

General Invited Lectures (Top Congress Hall)

9:00  G08  M.M. Turner  
Dublin City University, Dublin, Ireland  
Modelling of multi-frequency capacitive discharges

9:45  G09  E.V. Barnat  
Sandia National Laboratories, Albuquerque, USA  
Measurement of electric fields in radiofrequency discharges

10:30  Coffee break

11:00  G10  E. Stamate  
Technical University of Denmark, Roskilde, Denmark  
Charge dynamics in a three-dimensional plasma-sheath lens; phenomenology and applications

11:45  ICPIG2009 Presentation

12:00  Closing Ceremony
Tours for Accompanying Persons

A1) Grand City Tour of Prague
A2) Konopiste Castle
A3) Excursion to Karlovy Vary
A4) City Tour of Prague-Jewish Quarter

The Grand City Tour of Prague is for accompanying person included in the registration fee. This tour will be held on Monday, July 16, 2007 from 13.00 till 16.30. This excursion starts and ends at the Conference Venue - Top Hotel Praha. All other tours offered in the Tours form are bookable in advance and are specially arranged for accompanying persons.

Conference Excursions - July 18, 2007

C1) Grand City tour of Prague
C2) Karlstejn Castle
C3) Kutna Hora
C4) Plzensky Prazdroj Brewery
C5) Excursion to Glass manufacturies
C6) Excursion to the Institute of Plasma Physics

Post-Conference Tours

P1) Cesky Krumlov, Castle Hluboka
P2) Karlovy Vary Spa, Marianske Lazne Spa, Frantiskovy Lazne Spa

All tours are guided by English speaking guides. All tours specially organized for the participants of the conference will take place if attended by at least 15 persons. If not the conference Management Office will offer alternative tours from regular tour operators.

Tours for Individuals:

All offered tours except C4) Pilsner Brewery, C5) Glass manufacturies, C6) Institute of Plasma Physics and both Post-Conference excursions (P1+P2) is possible to book on all other conference days via regular tour operators on site at the Conference Venue at the Conference Registration Desk. Kindly note that it is necessary to book them at least one day before the tour starts.
USEFUL CONTACTS

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Municipal police phone 156

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- Visa Czech Republic – phone 800 142 121